

Secretary's Order No.: **2008-A-0055**

RE: Proposed Regulation No. 1147: CO₂ Budget Trading Program
*Regional Greenhouse Gas Initiative (RGGI) to Address
Carbon Dioxide (CO₂) from Electric Generating Units (EGUs)*

Date of Issuance: October 15, 2008

Effective Date of the Amendment: November 11, 2008

I. Background:

A public hearing was held on Monday, September 22, 2008, in the Richardson and Robbins Auditorium of DNREC, 89 Kings Highway, Dover, Delaware, to receive public comment on Delaware's proposed new air regulation, Regulation No. 1147: CO₂ Budget Trading Program - Regional Greenhouse Gas Initiative (RGGI), to address Carbon Dioxide (CO₂) emissions from Electric Generating Units (EGUs) - hereinafter referred to as the "RGGI". This new regulation will create Delaware's portion of a multi-state CO₂ cap-and-trade program. The cap-and-trade program was developed by the RGGI, which is a cooperative effort among ten Northeastern and Mid-Atlantic States, to wit: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. The purpose of RGGI is to reduce the emissions of CO₂ from EGUs. CO₂ is a principal human-caused greenhouse gas which contributes to global warming.

Beginning in 2009 through 2015, the emissions of CO₂ from any EGU with a maximum rated heat input capacity of equal to or greater than 25 megawatts that is located in a RGGI state would be capped at

current levels (emissions from Delaware affected facilities account for approximately 7.5 million tons). After 2015, the cap would be reduced incrementally to achieve a 10 percent reduction by 2019. Under the cap-and-trade program, one allowance is equivalent to one ton of CO₂ emissions allowed by the cap. Each subject EGU will be required to have enough allowances to cover its reported emissions during the three year compliance periods. The EGUs may buy or sell allowances, but individual EGU emissions shall not exceed the amount of allowances it possesses. The total amount of the allowances will be equal to the emissions cap for the RGGI states.

The Department has the authority to promulgate this regulation under 7 Del.C., Chapter 60. From the very beginning of this promulgation process (beginning in April of 2007 with the signing of Start Action Notice 2007-04), the Department has been extremely diligent with regard to posting all available information (including, but certainly not limited to, the draft regulatory language) concerning RGGI on DNREC's website for public review, and underwent an intense stakeholder process, including holding no less than five stakeholder workgroup meetings since February 2008, so that the public would be able to provide meaningful input concerning this regulatory matter. During this time, the Department shared pre-proposal drafts of the proposed regulations with the regulated community, and received thoughtful comment in return. The proposed regulations are also based

on a model rule developed by all RGGI states, which itself was subject to development in an open and transparent process with multiple stakeholder meetings, including many stakeholders from the regulated community in Delaware.

As noted above, public comment was received by the Department, both prior to and subsequent to the public hearing on September 22, 2008. Additional comments were received from the regulated community, as well as from individual citizens, during the post-hearing phase of this matter, all of which became part of the record in this case as well. Following the close of the record for public comment, the Air Quality Management Section of the Department prepared a detailed and extensive Response Document, dated October 8, 2008, which thoroughly addressed all comments received during the pre-hearing, hearing, and post-hearing phases of this process.

Thereafter, the Hearing Officer completed her report, dated October 14, 2008, and incorporated the aforementioned Department's Response Document of October 8, 2008 into the same. Accordingly, that Hearing Officer's report, including all attachments, is expressly incorporated hereinto this Order at this time. Proper notice of this hearing was provided, as required by law.

II. Findings:

The Department has provided a reasoned analysis and a sound conclusion with regard to the responses given to each public comment,

as reflected in the Hearing Officer's Report of October 14, 2008, which, again, is attached and expressly incorporated into this Order. Moreover, the following findings and conclusions are entered at this time:

1. The Department has jurisdiction under its statutory authority to make a determination in this proceeding;
2. The Department provided adequate public notice of the proceeding and the public hearing in a manner required by the law and regulations;
3. The Department held a public hearing in a manner required by the law and regulations;
4. The Department considered all timely and relevant public comments in making its determination;
5. The Department has reviewed this proposed regulation in the light of the Regulatory Flexibility Act, and believes the same to be lawful, feasible and desirable, and that the recommendations as proposed should be applicable to all Delaware citizens equally;
6. Formal promulgation of proposed Regulation No. 1147 will create Delaware's portion of a multi-state carbon dioxide cap-and-trade program, as developed by the RGGI, which is a cooperative effort among ten Northeastern and Mid-Atlantic States to reduce the emissions of CO₂ from EGUs;

7. Upon implementation of this initiative, beginning in 2009 through 2015, the total emissions of CO₂ from all EGUs with a maximum rated heat input capacity of equal to or greater than 25 megawatts that is located in a RGGI state would be stabilized at levels roughly equivalent to average annual emissions during 2000-2002;
8. After 2015, the carbon dioxide emissions would be reduced incrementally to achieve a 10 percent reduction by 2019;
9. Under the RGGI cap-and-trade program, one allowance will be issued for each ton of CO₂ emissions allowed by the cap. Each subject EGU will be required to have enough allowances to cover its reported emissions for the 3-year control period. The EGUs may buy or sell allowances, but individual EGU emissions shall not exceed the amount of allowances it possesses. The total amount of the allowances will be equal to the emissions cap for the RGGI states;
10. Through RGGI, Delaware will accomplish a reduction of CO₂ emissions, support a green economy, promote energy independence, and provide a model for a national program to reduce CO₂ emissions;
11. RGGI's phased approach, with initially modest emission reductions, will provide clear market signals and regulatory certainty without resulting in dramatic electricity price impacts;

12. The RGGI program, once implemented, will produce numerous environmental and economic benefits for Delaware, including, but not limited to, emission reductions, cost efficiency with the use of auction allowances, overall auction design, and serving as a model for other major carbon markets under consideration in other regions, both nationally and internationally;
13. The formal Response Document, as drafted by the Air Quality Management Section of the Department's Division of Air and Waste, dated October 8, 2008 and attached to the Hearing Officer's report as Attachment "C", provides a thorough, accurate and balanced summary of the public comment received by the Department throughout all phases of the record during this regulatory promulgation. Moreover, the conclusions with respect to each issue and comment are well-reasoned and based upon the record. As such, they are sufficient to serve as specific findings for that purpose;
14. The Department has an adequate record for its decision, and no further public hearing is appropriate or necessary;
15. The Department's proposed regulation, as published in the September 1, 2008 *Delaware Register of Regulations* and as set forth within Attachment "A" in the Hearing Officer's report, is adequately supported, not arbitrary or capricious, and is consistent with the applicable laws and regulations.

Consequently, it should be approved as a final regulation, which shall go into effect ten days after its publication in the next available issue of the *Delaware Register of Regulations*;

16. The Department shall submit the proposed regulation as a final regulation to the Delaware Register of Regulation for publication in its next available issue, and shall provide written notice to the persons affected by the Order.

III. Order:

Based on the record developed, as reviewed in the Hearing Officer's Report dated October 14, 2008, and expressly incorporated herein, it is hereby ordered that the new regulation, Regulation No. 1147: CO₂ Budget Trading Program - *Regional Greenhouse Gas Initiative (RGGI) to Address Carbon Dioxide (CO₂) from Electric Generating Units (EGUs)*, be promulgated in final form in the customary manner and established rule-making procedure required by law.

IV. Reasons:

The promulgation of new Regulation No. 1147 will establish the Regional Greenhouse Gas Initiative, i.e., RGGI, which is the first mandatory cap-and-trade program in the United States for carbon dioxide (CO₂), the principal human-caused greenhouse gas. It will be the culmination of a ten-state cooperative effort to reduce greenhouse gas emissions from electric power generation. Through RGGI, Delaware will

accomplish a reduction of CO₂ emissions, support a green economy, promote energy independence, and provide a model for a national program to reduce CO₂ emissions.

RGGI's phased approach, with initially modest emission reductions, will provide clear market signals and regulatory certainty without resulting in dramatic electricity price impacts. The RGGI program, once implemented, will produce numerous environmental and economic benefits for Delaware, including, but not limited to, emission reductions, cost efficiency with the use of auction allowances, and overall auction design. It will also serve as a model for other major carbon markets under consideration in other regions, both nationally and internationally.

In developing this regulation, the Department has balanced the absolute environmental need for the State of Delaware to promulgate regulations concerning this matter with the important interests and public concerns surrounding the same, in furtherance of the policy and purposes of 7 Del. C., Ch. 60.

/s/John A. Hughes
John A. Hughes
Secretary

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HEARING OFFICER'S REPORT

**RE: *Proposed Regulation No. 1147: CO₂ Budget Trading Program
Regional Greenhouse Gas Initiative (RGGI) to Address
Carbon Dioxide (CO₂) from Electric Generating Units (EGUs)***

Lisa A. Vest
Hearing Officer

October 14, 2008

1. Background Findings:

A public hearing was held on Monday, September 22, 2008, in the Richardson and Robbins Auditorium of DNREC, 89 Kings Highway, Dover, Delaware, to receive public comment on Delaware's proposed new air regulation, Regulation No. 1147: CO₂ Budget Trading Program - Regional Greenhouse Gas Initiative (RGGI), to address Carbon Dioxide (CO₂) emissions from Electric Generating Units (EGUs) – hereinafter referred to as the “RGGI”. This new regulation will create Delaware's portion of a multi-state CO₂ cap-and-trade program. The cap-and-trade program was developed by the RGGI, which is a cooperative effort among ten Northeastern and Mid-Atlantic States, to wit: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. The purpose of RGGI is to reduce the emissions of CO₂ from EGUs. CO₂ is a principal human-caused greenhouse gas which contributes to global warming.

Beginning in 2009 through 2015, the emissions of CO₂ from any EGU with a maximum rated heat input capacity of equal to or greater than 25 megawatts that is located in a RGGI state would be capped at current levels (emissions from Delaware affected facilities account for approximately 7.5 million tons). After 2015, the cap would be reduced incrementally to achieve a 10 percent reduction by 2019. Under the cap-and-trade program, one allowance is equivalent to one ton of CO₂ emissions allowed by the cap. Each subject EGU will be required to have enough allowances to cover its reported emissions during the three year compliance periods. The EGUs may buy or sell allowances, but individual EGU emissions shall not exceed the amount of allowances it possesses. The total amount of the allowances will be equal to the emissions cap for the RGGI states.

The Department has the authority to promulgate this regulation under 7 Del.C., Chapter 60. From the very beginning of this promulgation process (beginning in April of 2007 with the signing of Start Action Notice 2007-04), the Department has been extremely diligent with regard to posting all available information (including, but certainly not limited to, the draft regulatory language) concerning RGGI on DNREC's website for public review, and underwent an intense stakeholder process, including holding no less than five stakeholder workgroup meetings since February 2008, so that the public would be able to provide meaningful input concerning this regulatory matter.

During this time, the Department shared pre-proposal drafts of the proposed regulations with the regulated community, and received thoughtful comments in return. The proposed regulations are also based on a model rule developed by all RGGI states, which itself was subject to development in an open and transparent process with multiple stakeholder meetings, including many stakeholders from the regulated community in Delaware.

As noted above, public comment was received by the Department, both prior to and subsequent to the public hearing on September 22, 2008. Additional comments were received from the regulated community, as well as from individual citizens, during the post-hearing phase of this matter, all of which became part of the record in this case as well. Following the close of the record for public comment, the Air Quality Management Section of the Department prepared a detailed and extensive Response Document, dated October 8, 2008, which addressed all comments received during the pre-hearing, hearing, and post-hearing phases of this process. Proper notice of this hearing was provided, as required by law.

II. Summary of Record:

At the time of the public hearing on September 22, 2008, Valerie Gray, Planning Supervisor with the Department's Air Quality Management Section of the Department, introduced the Department's exhibits compiled in this matter into the formal hearing record. These

exhibits were contained in two very large binders, and were in excess of one hundred individual exhibits. For specificity with regard to the record developed in this matter, the actual proposed new regulation, Regulation No. 1147, “CO₂ Budget Trading Program”, as published in the *Delaware Register of Regulations* on September 1, 2008, and the Index List of all of the Department’s exhibits entered into the record at the time of the hearing, are both attached hereto as Attachment “A” and Attachment “B”, respectively, and are both expressly incorporated herein.

A. Origins and Aspects of RGGI:

Ms. Gray provided a brief history for those in attendance as to the origins of RGGI, and how the Department ultimately got to the public hearing held on the evening of September 22, 2008. Ms. Gray explained that the development of proposed Regulation No. 1147 began more than five years ago with planning, modeling and consultation with stakeholders to yield a program that will reduce CO₂ emissions at the lowest possible cost, while simultaneously encouraging development of a clean-energy economy. The participating states designed RGGI using a transparent, five-year process that included active engagement with energy industry representatives, non-governmental organizations and other stakeholders, as well as with technical experts. RGGI is expected to lower emissions without significantly affecting energy prices.

The RGGI regional cap establishes the limit on regional power plant CO₂ emissions. Each participating state’s CO₂ budget trading

program establishes its respective share of the regional cap, and each state will make available CO₂ allowances in a number equivalent to its portion of the regional cap. Each CO₂ allowance represents a permit to emit one ton of CO₂. State control over the number of allowances ensures that total emissions in the region will not exceed the cap.

The RGGI states will distribute CO₂ allowances primarily through regional auctions. CO₂ allowances can also be traded on a secondary market, where power plants that obtain more allowances than they need - or that reduce their CO₂ emissions - can sell the excess allowances, and those needing additional allowances can buy them. Proceeds from the sale of allowances will fund state programs that promote energy efficiency and projects for clean renewable energy, such as solar and wind power. These funds will reinforce the RGGI program's effectiveness in reducing greenhouse gas emissions.

With regard to using offsets¹, the RGGI states have approved a carefully chosen group of offsets that power plants can use to meet up to 3.3 percent of their compliance obligations. Offsets impart significant environmental and economic benefits for sources of offset projects (such as landfill operators or farmers). They also increase flexibility for the electricity sector.

It is anticipated that RGGI will accomplish a reduction of CO₂ emissions, support a green economy, promote energy independence, and provide a model for a national program to reduce CO₂ emissions, thus benefiting both the environment and the economy. Innovative aspects of

RGGI design are already being incorporated into congressional cap-and-trade proposals, and may influence the future direction of the European Union Emissions Trading Scheme for CO₂ (EUETS) and other programs currently under development worldwide.

RGGI and other carbon programs are currently creating a new carbon market in the United States. To promote fairness and transparency in this market, RGGI has adopted a well-tested auction format, with open and independent oversight and an ability to adjust auction eligibility and procedures as needed in the future. Under RGGI, ten Northeastern and Mid-Atlantic States have agreed to use an auction of allowances² as the means to distribute allowances to electric power plants regulated under state CO₂ cap-and-trade programs. The RGGI cap-and-trade programs are the first to distribute nearly all allowances by auction. Allowances will be made available for sale on a quarterly basis in lot sizes of 1,000 allowances. The initial auction will offer allowances through a single-round, uniform-price, sealed-bid auction format. While the goal is to maintain a consistent auction format, RGGI will retain the option to transition to a multiple-round, ascending-price format if necessary. Allowances will be identified with a vintage corresponding to the allowance's allocation year and will be offered for sale prior to the end of that three-year compliance period in which they

¹ An offset is a greenhouse gas emission reduction or carbon sequestration project at a source outside the electricity sector.

² An allowance is a limited permission to emit one ton of CO₂.

were issued. Future allowance vintages also will be made available in auctions beginning in 2009. All market participants will be eligible to participate in the initial auction, provided they meet qualification and participation requirements, which will include provision of financial security. The RGGI states retain flexibility to limit participant eligibility in subsequent auctions. Auction rules will limit the number of allowances that associated entities may purchase in a single auction to 25 percent of the allowances offered for sale in that auction. Unsold allowances will be made available for sale in future auctions. In 2012, as part of the first program review, the participating states will decide whether to retire any unsold allowances from the first compliance period, or to offer these allowances for sale in subsequent auctions during the second compliance period. Each auction will be noticed at least 45 days before its date on the RGGI web site (<http://www.rggi.org>). After each auction, the participating states will make public the auction clearing price and the total amount of allowances sold in auction on the RGGI website and such other data as may be released without negatively impacting the integrity of the auction.

The RGGI states have retained a professional independent market monitor to oversee auctions and subsequent market activity. The monitor will observe the conduct of the auction qualification process and the conduct of the auction, and will report on whether the auction was conducted in accordance with the participating states' regulations and

the noticed auction procedures, and whether the auction results represented a competitive outcome. Again, more specifics regarding the auction process and market oversight aspects of RGGI are available for review on the RGGI website, as referenced above.

The environmental and economic benefits of RGGI are numerous. Emission reductions from electricity generators are the first outcome of RGGI. To maximize the program's environmental and economic benefit, the states have agreed to dedicate revenues from the CO₂ allowance auctions to consumer energy efficiency, energy conservation, and clean energy development. Auction revenues will allow states to increase per capita support for consumer energy efficiency programs by more than 50 percent on average in the RGGI states. Cost efficiency is another benefit of the RGGI. By auctioning allowances, RGGI states are using market forces, rather than government mandates, to set a price for carbon. Establishing a market price for carbon will help power plants determine the most efficient and cost-effective means to cut CO₂ emissions. Investing auction revenue to reduce electricity demand and deploy clean energy technologies will reduce the cost of meeting the regional CO₂ cap and provide consumer benefits. Again, RGGI is not expected to significantly affect consumer energy prices. Yet another benefit of RGGI is the auction design utilized in this program. Auctions are proven market tools, and the RGGI auction design is based on a rigorous design study and stakeholder input. The RGGI auction design builds on the

successful emissions market cap-and-trade systems currently used to control nitrogen oxides (NO_x) and sulfur dioxide (SO₂). RGGI's open auctions will establish a transparent cost for allowances and incorporate an accounting of CO₂ emissions into the electricity markets in the region.

B. Discussion of Public Comments:

To individually discuss each and every comment received from the public during the development of this proposed RGGI Regulation would cause this report's pages to number into the hundreds. However, following the close of the record for public comment, Valerie Gray of the Air Quality Management Section of the Department's Division of Air and Waste prepared a detailed and extensive Response Document, dated October 8, 2008, which addressed all comments received by the Department during all phases of this regulatory promulgation. This Response Document, which is attached hereto as Attachment "C" and is expressly incorporated into this Hearing Officer's report at this time, thoroughly encompasses the full range of comment contained in the record, including those from the public as well as from the regulated community. Each comment was meticulously organized according to its source(s), followed by a thorough and rational discussion of the issue based on the record.

After reviewing the Department's Response Document authored by Ms. Gray, it is this Hearing Officer's opinion that she has done an excellent job of identifying all of the comments received by the

Department in this matter, and discussing them in a thorough and balanced manner, thus accurately reflecting the information as contained in the record. Therefore, the Secretary may get an in-depth understanding of the record developed in this matter by reading the Department's Response Document, which again is expressly incorporated into this report and attached hereto for that purpose.

III. Findings and Conclusions:

The new RGGI regulation (No. 1147), as currently proposed, has been developed after more than five years of planning, modeling and consultation by the Department, and represents a transparent process that included active engagement with energy industry representatives, non-governmental organizations, technical experts, and the public in general to develop the first mandatory cap-and-trade program in the United States for carbon dioxide (CO₂), the principal human-caused greenhouse gas. It is a ten-state cooperative effort to reduce greenhouse gas emissions from electric power generation, while encouraging development of a clean-energy economy, and it is this Hearing Officer's opinion that Delaware should be proud to be a part of this Northeastern/Mid-Atlantic States' initiative. Based on the record developed in the course of this hearing, this Hearing Officer hereby concludes that the record does warrant, and that the Department has provided appropriate reasoning, with regard to the need for the promulgation of new Regulation No. 1147, and has thoroughly addressed

the public's questions and/or comments provided during the various phases of the record developed in this matter.

It should also be noted that the Department has reviewed this proposed new regulation in the light of the Delaware Regulatory Flexibility Act, and believes the same to be lawful, feasible and desirable, and that Regulation No. 1147, as proposed, should be applicable to all Delawareans equally.

IV. Recommendations:

Based on the above discussion, and for the reasons stated above, I hereby recommend promulgation of new Delaware Regulation No. 1147, *Regional Greenhouse Gas Initiative (RGGI) to Address Carbon Dioxide (CO₂) from Electric Generating Units (EGUs)*, in the customary manner provided by law. I also recommend that the following findings be made with regard to this matter:

1. The Department has jurisdiction under its statutory authority to make a determination in this proceeding;
2. The Department provided adequate public notice of the proceeding and the public hearing in a manner required by the law and regulations;
3. The Department held a public hearing in a manner required by the law and regulations;
4. The Department considered all timely and relevant public comments in making its determination;

5. The Department has reviewed this proposed regulation in the light of the Regulatory Flexibility Act, and believes the same to be lawful, feasible and desirable, and that the recommendations as proposed should be applicable to all Delawareans equally;
6. Formal promulgation of proposed Regulation No. 1147 will create Delaware's portion of a multi-state carbon dioxide cap-and-trade program, as developed by the RGGI, which is a cooperative effort among ten Northeastern and Mid-Atlantic States to reduce the emissions of CO₂ from EGUs;
7. Upon implementation of this initiative, beginning in 2009 through 2015, the total emissions of CO₂ from all EGUs with a maximum rated heat input capacity of equal to or greater than 25 megawatts that is located in a RGGI state would be stabilized at levels roughly equivalent to average annual emissions during 2000-2002;
8. After 2015, the carbon dioxide emissions would be reduced incrementally to achieve a 10 percent reduction by 2019;
9. Under the RGGI cap-and-trade program, one allowance will be issued for each ton of CO₂ emissions allowed by the cap. Each subject EGU will be required to have enough allowances to cover its reported emissions for the 3-year control period. The EGUs may buy or sell allowances, but

individual EGU emissions shall not exceed the amount of allowances it possesses. The total amount of the allowances will be equal to the emissions cap for the RGGI states;

10. Through RGGI, Delaware will accomplish a reduction of CO₂ emissions, support a green economy, promote energy independence, and provide a model for a national program to reduce CO₂ emissions;
11. RGGI's phased approach, with initially modest emission reductions, will provide clear market signals and regulatory certainty without resulting in dramatic electricity price impacts;
12. The RGGI program, once implemented, will produce numerous environmental and economic benefits for Delaware, including, but not limited to, emission reductions, cost efficiency with the use of auction allowances, overall auction design, and serving as a model for other major carbon markets under consideration in other regions, both nationally and internationally;
13. The formal Response Document, as drafted by the Air Quality Management Section of the Department's Division of Air and Waste, dated October 8, 2008 and attached hereto as Attachment "C", provides a thorough, accurate and balanced summary of the public comment received by the

Department throughout all phases of the record during this regulatory promulgation. Moreover, the conclusions with respect to each issue and comment are well-reasoned and based upon the record. As such, they are sufficient to serve as specific findings for that purpose;

14. The Department has an adequate record for its decision, and no further public hearing is appropriate or necessary;
15. The Department's proposed regulation, as published in the September 1, 2008 *Delaware Register of Regulations* and as set forth within Attachment "A" hereto, is adequately supported, not arbitrary or capricious, and is consistent with the applicable laws and regulations. Consequently, it should be approved as a final regulation, which shall go into effect ten days after its publication in the next available issue of the *Delaware Register of Regulations*;
16. The Department shall submit the proposed regulation as a final regulation to the Delaware Register of Regulation for publication in its next available issue, and shall provide written notice to the persons affected by the Order.

In addition, I recommend issuing the attached Secretary's Order to effectuate this purpose and adopting the Hearing Officer's findings and conclusions as expressed hereinabove.

/s/ Lisa A. Vest.
LISA A. VEST,
Hearing Officer

Ahear/RGGI.08